

# SLIDE STATUS SHEET

PROJECT NAME CSPA - PL1

NUMBER	DONE(Y/N)	NUMBER	DONE(Y/N)	NUMBER	DONE(Y/N)	NUMBER	DONE(Y/N)
1	✓ X	14	✓ X	28	✓ X		
2	✓ X	15	✓ X	29	✓ X		
2.1	✓ X	16	✓ X	30	✓ X		
2 times 3	✓✓ X	17	✓ X	31	✓ X		
1 for PL2	✓ X	18	✓ X	32	✓ X		
4	✓ X	19	✓ X	33	✓ X		
5	✓ X	20	✓ X	34	✓ X		
6	✓ X	21	✓ X				
7	✓ X	22	✓ X				
8	✓ X	23	✓ X				
9	✓ X	24	✓ X				
10	✓ X	25	✓ X				
11	✓ X	26	✓ X				
12	✓ X	27	✓ X				
13	✓ X						

INPUT



## European Customer Service Overview

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Peter Lines  
Director, European Research  
INPUT



## Customer Services Outlook Western Europe

- 1989 - Issues
- Current trends
- Strategic factors - 1998

INPUT

Notes:

CSPA-PL1-2



## Customer Service Challenges

- Independent maintenance
- Engineer skills
- Cost of spares
- Logistics
- Professional services

INPUT

Notes:

CSPA-PL1-2.1





## Market Structure

Hardware

Customer service

Software products

Professional services

Processing services

INPUT

NOTES:

CSPA-PL1-3



## Customer Service Market

- Hardware maintenance
- Systems software support
- Professional services
- Training and education

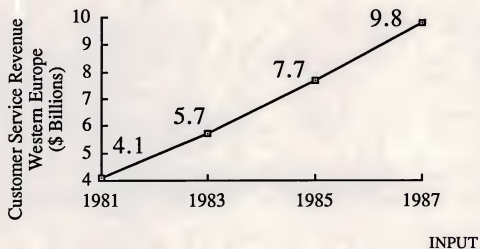
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Notes:

CSPA-PL1-4



## Revenue Growth of the Customer Services Market, 1981-1987



NOTES:

CSPA-PL1-5



## Western European Computer Systems Market 1988

Sector	\$ Billions	87/88 % Growth
Equipment	44	10
Customer service	11	8
Software products	14	24
Professional services	13	22
Processing services	8	11
Total	90	14

INPUT

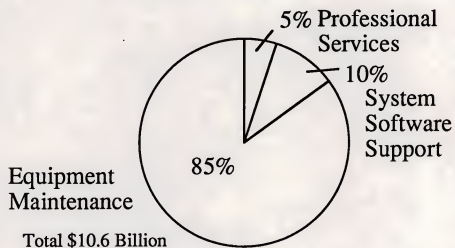
NOTES:

CSPA-PL1-6





## Western European Customer Service Market, 1988



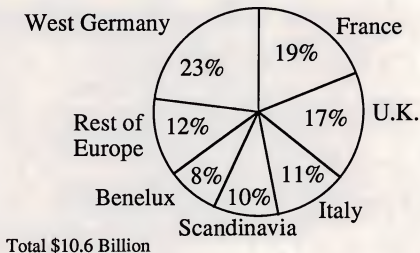
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NOTES:

CSPA-PL1-7



## Western European Customer Service Market, 1988



NOTES:

CSPA-PL1-8



## Customer Service Issues

- Competition
- Marketing
- User satisfaction

INPUT

Notes:

CSPA-PL1-9



## Customer Service Issues

- Skill needs
- Professional services

INPUT

Notes:

CSPA-PL1-10





## Customer Service Issues

- Pricing/costs
- Automated service
- Self maintenance

INPUT

Notes:

CSPA-PL1-11



**Current Trends  
1988-1993  
European Customer Service**

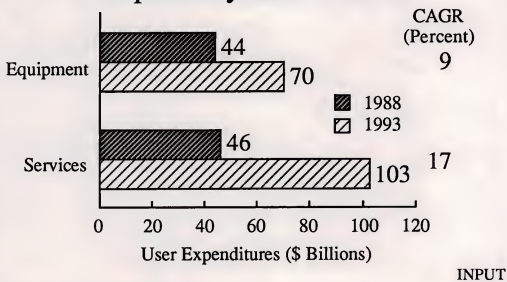
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Notes:

CSPA-PL1-12



## Western European Computer Systems Market

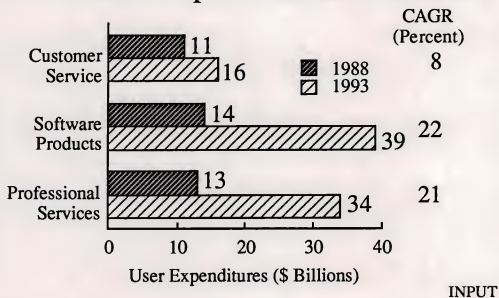


NOTES:

CSPA-PL1-13



## Western European Service Markets



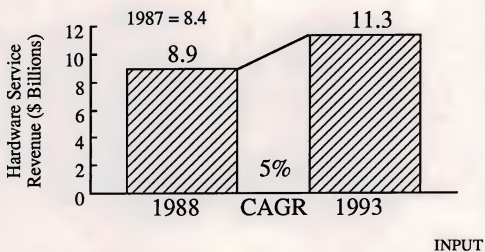
NOTES:

CSPA-PL1-14





## Customer Services Market Western Europe

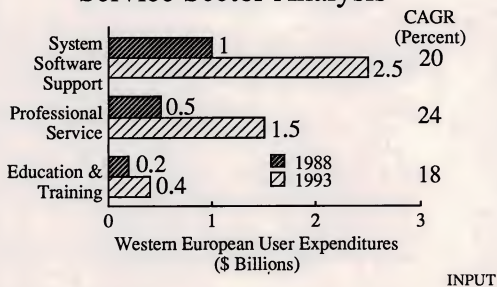


NOTES:

CSPA-PL1-15



## Customer Service Market Service Sector Analysis



NOTES:

CSPA-PL1-16



## Key Trends Influencing Customer Service

- Repair → replacement
- Remote/automated services
- Logistics

INPUT

Notes:

CSPA-PL1-17



## Key Trends Influencing Customer Service

- Unit → system support
- Changing skill mix
- Professional services

INPUT

Notes:

CSPA-PL1-18





## The Customer Service Challenge



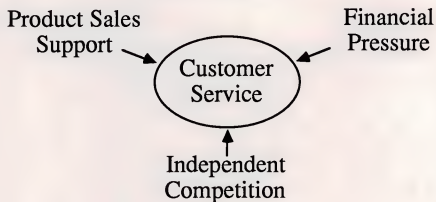
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NOTES:

CSPA-PL1-20



## The Customer Service Challenge



INPUT

NOTES:

CSPA-PL1-19



Strategic Factors  
1988-1998

Customer Service  
Western Europe

INPUT

NOTES:

CSPA-PL1-21



## Strategic Factors

- Technology
- Commercial/organizational
- Information systems

INPUT

Notes:

CSPA-PL1-22





## Technology Drivers

- Semiconductor technology
- Data storage
- Telecommunications
- Input/output

INPUT

Notes:

CSPA-PL1-23



## Software Drivers

- Relational data structures
- Open systems standards
- Multiplatform software

INPUT

Notes:

CSPA-PL1-24



## Fundamental Driving Forces

*Key Business Trends:*

- Shorter product lifecycles
- More customization/specialization
- Narrower market segments
- Higher impact of technology
- More competition

INPUT

Notes:

CSPA-PL1-25



## Key Trends for the 1990s

- Product and service markets blurring
- Changing market structure
- Internationalisation

INPUT

Notes:

CSPA-PL1-26





## Fundamental Driving Forces Are Restructuring the Role of IS

- Technology-driven to user-driven
- Centralised to heterogeneous

INPUT

Notes:

CSPA-PL1-27



## Information Systems—Major Issues

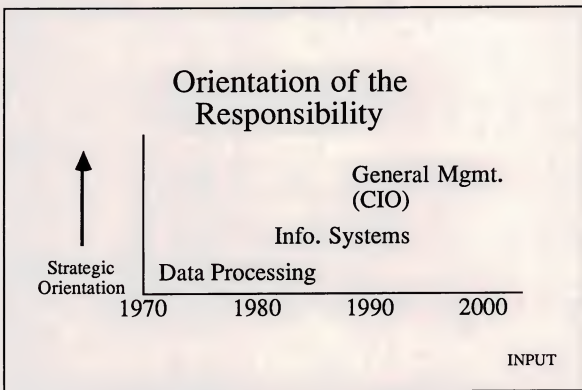
- Rising management expectations
- User demands for increasingly complex solutions
- Managing the technology investment
- Integration of data/technology/applications
- Delivery of "mission critical" systems

INPUT

Notes:

CSPA-PL1-28



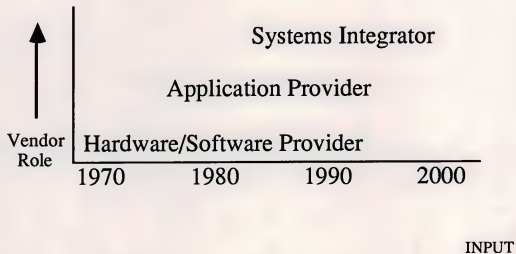


NOTES:

CSPA-PL1-29



## Role of the IS Vendor



NOTES:

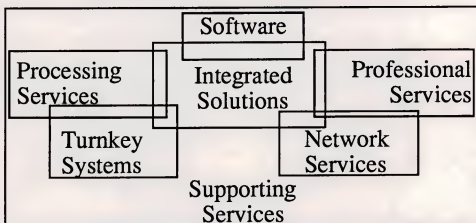
CSPA-PL1-30





## IS Market Structure—1990s

*Emphasis on Supporting Services*



INPUT

NOTES:

CSPA-PL1-31



## Implications for Customer Service Hardware Maintenance

- Reactive → proactive
- Service automation
- Logistics
- Repackaging

INPUT

Notes:

CSPA-PL1-32



# Implications for Customer Service

## User Satisfaction

- Quality
- System responsibility
- Skill profile

INPUT

Notes:

CSPA-PL1-33



# Implications for Customer Service

## Supporting Services—The Opportunity

- Redefinition
- Professional services
- Independents

INPUT

Notes:

CSPA-PL1-34





Peter Lines  
Director  
INPUT

Peter Lines has 20 years of experience in the information industry. He has held various market research, systems analysis, marketing support, and planning management positions with Sperry Univac, International Computers Ltd., and English Electric Computers.

Mr. Lines earned a B.Sc. degree in economics from the London School of Economics.



# QUALITY CONTROL PROOFREADING SIGNOFF

DESCRIPTION European Customer Service Overview

PROJECT CODE CSPA-PL-1

AUTHOR PETER LINES

DATE TO PROOFREADER	TO BE PROOFED BY	INITIAL	DATE
<u>4/7/89</u>	<u>Steven Eng</u>	<u>SE</u>	<u>4/7/89</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<b>FINAL Q.C.</b>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

☐ READY FOR PRINTER

# INPUT

# PRODUCTION WORK ORDER

(Please fill out both sides)

DATE IN: \_\_\_\_\_ DATE DUE: 4/19/89 PROJECT CODE: CSPA-PL1

AUTHORIZED BY: Peter Lines ☐ NEW ☐ REPEAT ☐ REPEAT W/CHANGE

## WORK SPECIFICATIONS

DATE OF PRESENTATION: \_\_\_\_\_

### Additional Information

- ☐ 35mm Slides \_\_\_\_\_  
☐ Foils \_\_\_\_\_  
☐ Exhibits \_\_\_\_\_  
☐ Questionnaire \_\_\_\_\_  
☐ Letter \_\_\_\_\_  
☐ Business Card \_\_\_\_\_  
☐ Note Paper \_\_\_\_\_  
☐ Newsletter \_\_\_\_\_  
☐ News Release \_\_\_\_\_  
☐ Form \_\_\_\_\_  
☐ Brochure \_\_\_\_\_  
☐ Cover Design \_\_\_\_\_  
☐ Other \_\_\_\_\_

Number of pages submitted \_\_\_\_\_ Text  
\_\_\_\_\_ Graphics

## SPECIAL INSTRUCTIONS

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## PRINTING SPECIFICATIONS

- Quantity/Slides/Foils \_\_\_\_\_  
Quantity/Hard Copy \_\_\_\_\_  
Paper Size \_\_\_\_\_ X \_\_\_\_\_  
Finished Size \_\_\_\_\_ X \_\_\_\_\_  
Number of Pages \_\_\_\_\_  
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☐ Photocopy \_\_\_\_\_  
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☐ Double side \_\_\_\_\_  
☐ Three hole punch \_\_\_\_\_  
☐ Velobind punch \_\_\_\_\_  
☐ Trim to \_\_\_\_\_ X \_\_\_\_\_  
☐ Binding \_\_\_\_\_  
☐ Cover \_\_\_\_\_  
☐ Paper Color \_\_\_\_\_  
☐ Ink Color \_\_\_\_\_  
☐ Copyright Paper \_\_\_\_\_  
☐ Fold ☐ 1/2 fold ☐ 1/3 fold \_\_\_\_\_  
☐ Pad \_\_\_\_\_  
☐ Saddle Stitch \_\_\_\_\_  
☐ Box \_\_\_\_\_  
☐ Shrink Wrap \_\_\_\_\_  
☐ Staple ☐ Corner ☐ 2 on side \_\_\_\_\_

## MAILING SPECIFICATIONS

Envelope: ☐ No. 10 ☐ 9 x 12 ☐ 10 x 13 ☐ Reply Envelope Quantity \_\_\_\_\_  
☐ First Class ☐ Bulk ☐ Address Labels (Zip Code Order)

### Enclosures:

- ☐ Letter \_\_\_\_\_  
☐ Questionnaire \_\_\_\_\_  
☐ Newsletter \_\_\_\_\_  
☐ News Release \_\_\_\_\_  
☐ Form \_\_\_\_\_  
☐ Brochure \_\_\_\_\_  
☐ Business Reply Envelope \_\_\_\_\_  
☐ Other \_\_\_\_\_

### Distribution:

### Quantity

- ☐ Initial Mailing \_\_\_\_\_  
☐ Shelf Stock \_\_\_\_\_  
☐ NJ \_\_\_\_\_  
☐ DC \_\_\_\_\_  
☐ London \_\_\_\_\_  
☐ Paris \_\_\_\_\_  
☐ Japan \_\_\_\_\_

TOTAL \_\_\_\_\_

MAIL \_\_\_\_\_ COPIES DIRECTLY TO: \_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_

1.

EUROPEAN CUSTOMER SERVICE  
OVERVIEW

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PETER LINES

DIRECTOR, EUROPEAN RESEARCH

CSPA - PL1-1

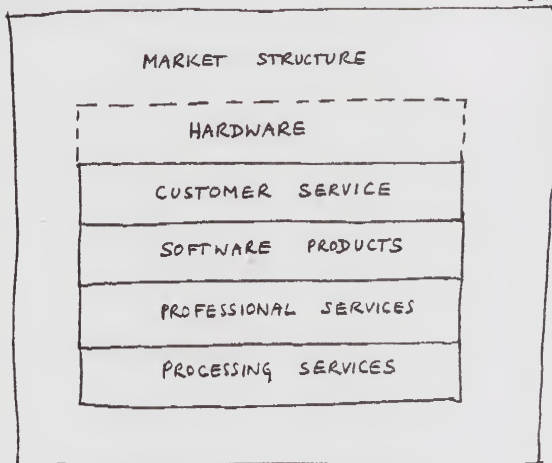
2.

CUSTOMER SERVICE OUTLOOK  
- WESTERN EUROPE

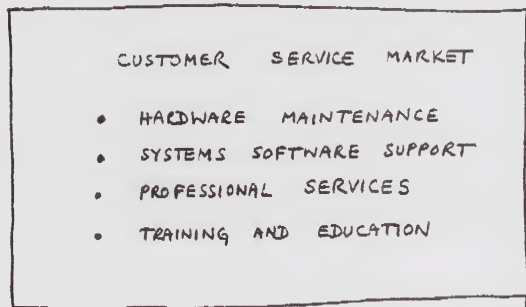
- 1989 - ISSUES
- CURRENT TRENDS
- STRATEGIC FACTORS - 1998



3.



4.



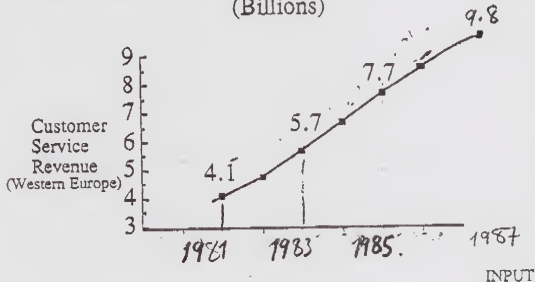
③





5.

# Revenue Growth of the Customer Services Market, 1980-1986 (Billions)



## NOTES:

*check re last years  
- He Rline Tax factor.*

CSPE PL-6

④



6.

## WESTERN EUROPEAN COMPUTER SYSTEMS SERVICES MARKET

1988

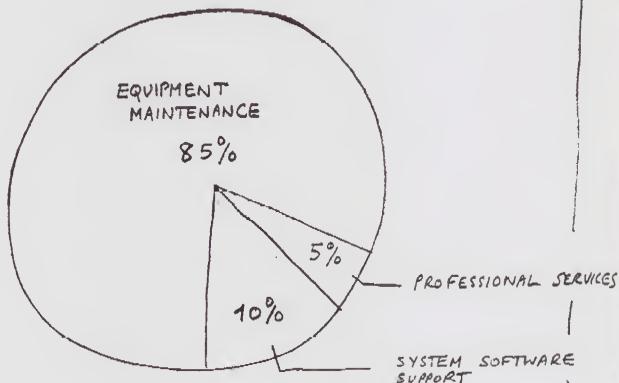
SECTOR	\$ BILLION	87/'88 GROWTH %
EQUIPMENT	44	10
CUSTOMER SERVICE	11	8
SOFTWARE PRODUCTS	14	24
PROFESSIONAL SERVICES	13	22
PROCESSING SERVICES	8	11
TOTAL	90	14

(5)

<u>Year</u>	<u>Amount</u>	<u>Remarks</u>
1911	100	Received from ...
1912	200	Received from ...
1913	300	Received from ...
1914	400	Received from ...
1915	500	Received from ...
1916	600	Received from ...
1917	700	Received from ...
1918	800	Received from ...
1919	900	Received from ...
1920	1000	Received from ...
1921	1100	Received from ...
1922	1200	Received from ...
1923	1300	Received from ...
1924	1400	Received from ...
1925	1500	Received from ...
1926	1600	Received from ...
1927	1700	Received from ...
1928	1800	Received from ...
1929	1900	Received from ...
1930	2000	Received from ...
1931	2100	Received from ...
1932	2200	Received from ...
1933	2300	Received from ...
1934	2400	Received from ...
1935	2500	Received from ...
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1937	2700	Received from ...
1938	2800	Received from ...
1939	2900	Received from ...
1940	3000	Received from ...
1941	3100	Received from ...
1942	3200	Received from ...
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1944	3400	Received from ...
1945	3500	Received from ...
1946	3600	Received from ...
1947	3700	Received from ...
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1949	3900	Received from ...
1950	4000	Received from ...
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1956	4600	Received from ...
1957	4700	Received from ...
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1969	5900	Received from ...
1970	6000	Received from ...
1971	6100	Received from ...
1972	6200	Received from ...
1973	6300	Received from ...
1974	6400	Received from ...
1975	6500	Received from ...
1976	6600	Received from ...
1977	6700	Received from ...
1978	6800	Received from ...
1979	6900	Received from ...
1980	7000	Received from ...
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1988	7800	Received from ...
1989	7900	Received from ...
1990	8000	Received from ...
1991	8100	Received from ...
1992	8200	Received from ...
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1995	8500	Received from ...
1996	8600	Received from ...
1997	8700	Received from ...
1998	8800	Received from ...
1999	8900	Received from ...
2000	9000	Received from ...
2001	9100	Received from ...
2002	9200	Received from ...
2003	9300	Received from ...
2004	9400	Received from ...
2005	9500	Received from ...
2006	9600	Received from ...
2007	9700	Received from ...
2008	9800	Received from ...
2009	9900	Received from ...
2010	10000	Received from ...

7.

WESTERN EUROPEAN CUSTOMER SERVICE  
MARKET - 1988



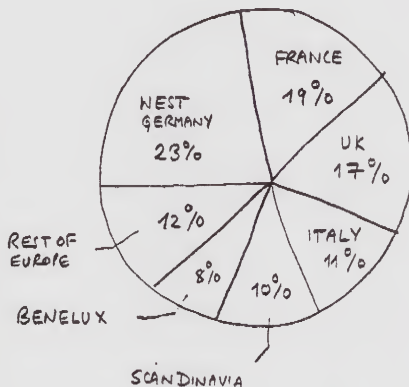
TOTAL \$10.6 Billion.

⑥



8

# WESTERN EUROPEAN CUSTOMER SERVICE MARKET - 1988



TOTAL \$10.6 Billion.





9

## CUSTOMER SERVICE ISSUES

- COMPETITION
- MARKETING
- USER SATISFACTION

10

## CUSTOMER SERVICE ISSUES

- SKILL NEEDS
- PROFESSIONAL SERVICES

11

## CUSTOMER SERVICE ISSUES

- PRICING / COSTS
- AUTOMATED SERVICE
- SELF MAINTENANCE

1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters  $\alpha$  and  $\beta$ . It is shown that the system of equations (1) has a solution for arbitrary values of the parameters  $\alpha$  and  $\beta$  if and only if the condition  $\alpha + \beta = 1$  is satisfied. In this case the solution is unique and is given by the formula

$$u(x, y) = \int_0^1 \int_0^1 f(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 g(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 h(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 k(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 l(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 m(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 n(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 o(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 p(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 q(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 r(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 s(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 t(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 u(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 v(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 w(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 x(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 y(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 z(\xi, \eta) d\xi d\eta + \int_0^1 \int_0^1 \dots$$

2. The second part of the paper is devoted to a detailed study of the properties of the solution of the system of equations (1) for arbitrary values of the parameters  $\alpha$  and  $\beta$ . It is shown that the solution of the system of equations (1) for arbitrary values of the parameters  $\alpha$  and  $\beta$  is unique and is given by the formula

12

CURRENT TRENDS

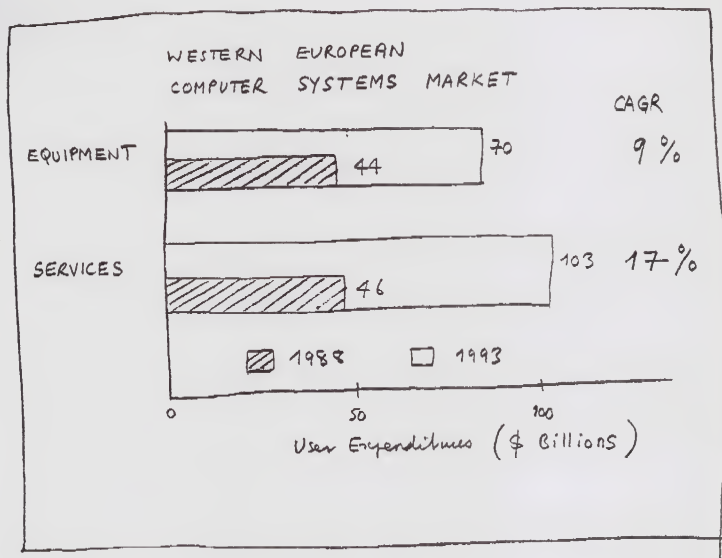
1988 - 1993

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EUROPEAN CUSTOMER SERVICE



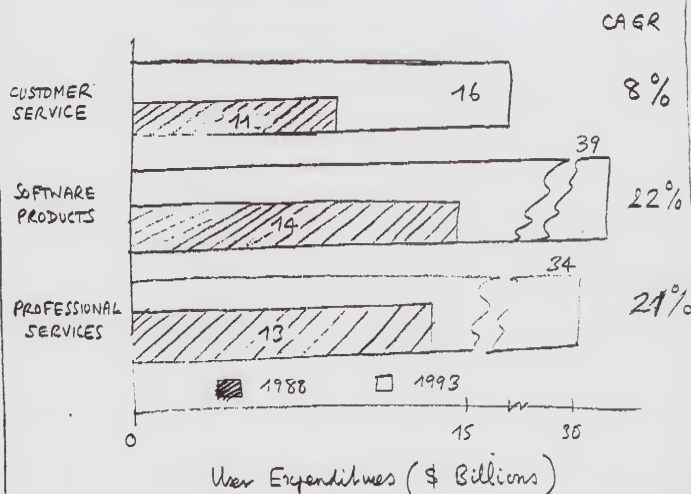
13





14

## WESTERN EUROPEAN SERVICE MARKETS



[ ]

186

187

[ ]

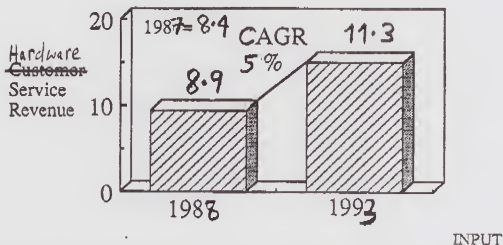
188

189



15

## Customer Services Market Western Europe (\$ Billions)



NOTES:

CSPE PL-5

12

# THEORY OF THE EARTH

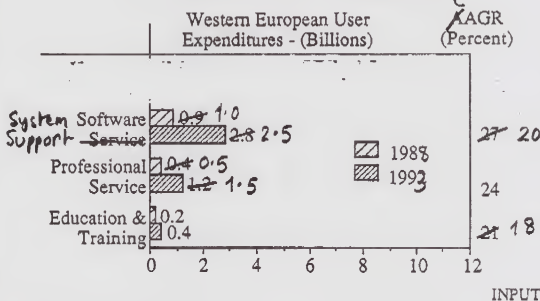
BY J. H. VAN DIJK



Diagram illustrating the internal structure of the Earth.

16

# Customer Service Market— Service Sector Analysis



NOTES:

CSPE PL-7

(13)



17

KEY TRENDS INFLUENCING  
CUSTOMER SERVICE

- REPAIR → REPLACEMENT
- REMOTE / AUTOMATED SERVICE
- LOGISTICS

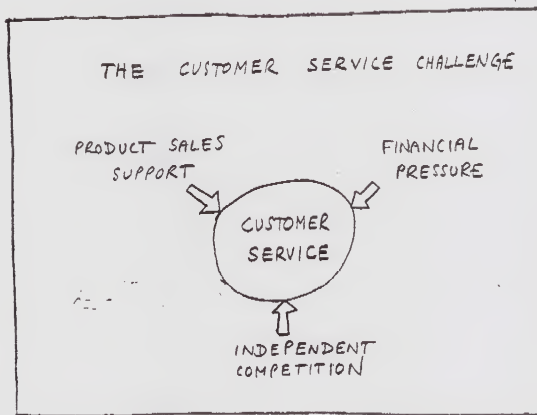
18

KEY TRENDS INFLUENCING  
CUSTOMER SERVICE

- UNIT → SYSTEM SUPPORT
- CHANGING SKILL MIX
- PROFESSIONAL SERVICES



19

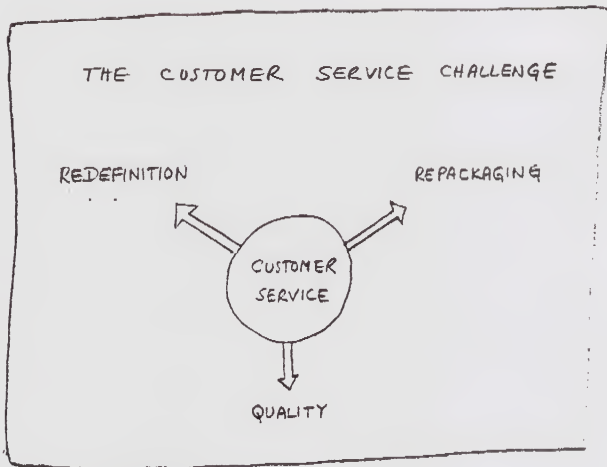


The current challenge is thus to





20



21





22.

## STRATEGIC FACTORS

- TECHNOLOGY
- COMMERCIAL / ORGANISATIONAL
- INFORMATION SYSTEMS

23.

## TECHNOLOGY DRIVERS

- INTEGRATED CIRCUITS
- DATA STORAGE
- TELECOMMUNICATIONS
- INPUT / OUTPUT

24.

## SOFTWARE DRIVERS

- RELATIONAL DATA STRUCTURES
- OPEN SYSTEMS STANDARDS
- MULTIPLATFORM SOFTWARE

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 354

LECTURE 1

1

25.

## Fundamental Driving Forces

### *Key Business Trends:*

- Shorter Product Lifecycles
- More Customization/Specialization
- Narrower Market Segments
- Higher Impact of Technology
- More Competition

INPUT

NOTES:

JJ88-DW1-3

(3)



26.

## KEY TRENDS FOR THE 1990'S

- PRODUCT & SERVICE MARKETS  
BLURRING
- CHANGING MARKET STRUCTURE
- INTERNATIONALISATION

## NOTES

Market Structure - Small v Big  
- New v Old.

Affects both IS Industry  
& Industry in general.

INTERNATIONALISATION - 1992





27.

FUNDAMENTAL DRIVING FORCES  
ARE RESTRUCTURING THE ROLE  
OF IS

- TECHNOLOGY-DRIVEN  
TO USER-DRIVEN
- CENTRALISED TO  
HETEROGENEOUS



28.

## Information Systems—Major Issues

- Rising Management Expectations
- User Demands for Increasingly Complex Solutions
- Managing the Technology Investment
- Integration of Data/Technology/Applications
- Delivery of "Mission Critical" Systems

INPUT

### NOTES:

The challenges to IS Management  
are to :

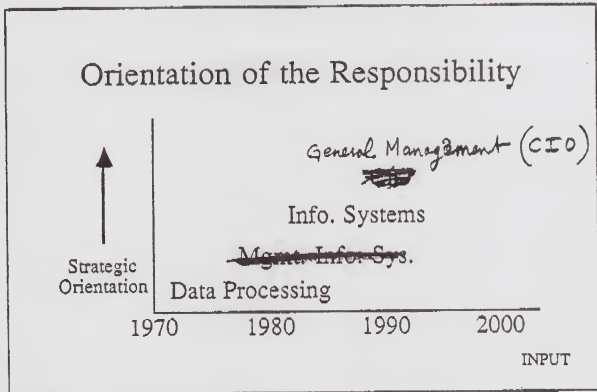
- : Adopt the New Technology
- : Integrate  $\Delta$  Technologies  
(COMPLEXITY)
- : Maintain Existing Systems.

JJ88-DW1-5A,B

(6)



29.



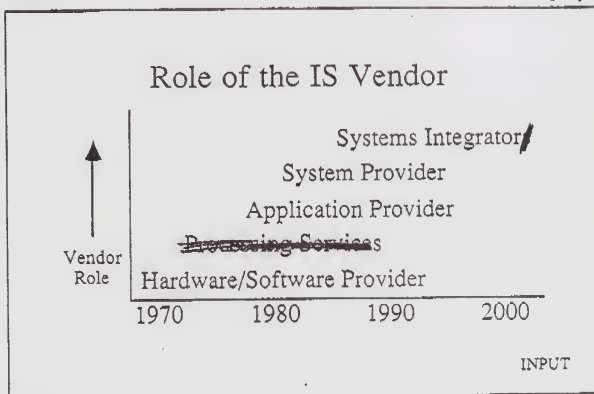
NOTES:

J/88-DT1-7

(7)



30.



NOTES:

IJ88-DT1-6

8

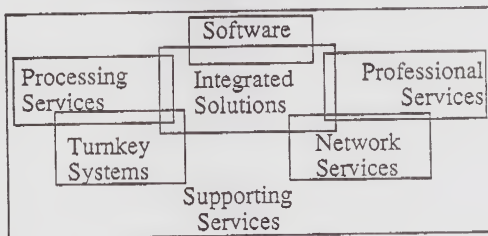




31.

## IS Market Structure—1990s

*Emphasis on Supporting Services*



INPUT

NOTES:

JJ88-DW1-18

9



32.

## IMPLICATIONS FOR CUSTOMER SERVICE

## HARDWARE MAINTENANCE

- REACTIVE → PROACTIVE
- SERVICE AUTOMATION
- LOGISTICS
- REPACKAGING

Service Automation

→ Labour → Capital Intensive.

Repackaging

- Warranty / Bundling.



33.

## IMPLICATIONS FOR CUSTOMER SERVICE

## USER SATISFACTION

- QUALITY
- SYSTEM RESPONSIBILITY
- SKILL PROFILE

Higher level responsibility for system

— problems management

H/W → Solution emphasis. —

Skill profile     $\Delta$  types    low level  
centralised etc.

implied  
knowledge  
of  
applications.



34.

## IMPLICATIONS FOR CUSTOMER SERVICE

### SUPPORTING SERVICES - THE OPPORTUNITY

- REDEFINITION
- PROFESSIONAL SERVICES
- INDEPENDENTS

Supporting Services → Growth Rate implications  
 Blurring Boundaries  
 ∴ what business sector do you want to be in.

→ ∴ Redefinition and (Relate to other services)  
 the ever-increasing presence of independents. ——— 4LL Buty  
 not just TPM in other sectors even more  
 will continue. by prof-services / ST

But Eye Supply will always have support role.

12

Solution emphasis

